



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/712,069

11/13/2003

Michael J. Czaplicki

1001-132

7915

25215 7590 01/17/2007
DOBRUSIN & THENNISCH PC
29 W LAWRENCE ST
SUITE 210
PONTIAC, MI 48342

EXAMINER

AFZALI, SARANG

ART UNIT

PAPER NUMBER

3726

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

01/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/712,069

NT
Applicant(s)

CZAPLICKI ET AL.

Examiner

Sarang Afzali

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed 10/26/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 16-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/1/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20061026</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 8, 9, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Barz et al. (US 6,103,341).

As applied to claims 1, 2, and 8, Barz et al. teach a process of forming an assembly comprising the steps of:

providing a thermosettable material, the material being selected from a sheet molding compound/Vinyl ester (col. 3, lines 35-36), molding (col. 3, line 25) the thermosettable material to form a carrier member (body 22, , Fig. 1);

applying an activatable material (pellets 26, Fig. 1) to a surface (24, Fig. 1) of the carrier member (body 22, Fig. 1) for forming a reinforcement sealing or baffling member (Fig. 1);

placing the reinforcement, sealing or baffling member within a cavity or adjacent to a surface of an article of manufacture (channel 39 of pillar 36, Fig. 4), the cavity or surface being defined by one or more walls (walls 38, Fig. 4) of a structure of the article of manufacture; and

Art Unit: 3726

activating the expandable material to form a foam (40, Fig. 4) that is adhered to the carrier member and the surface or walls of the structure of the article of manufacture (col. 4, lines 36-39).

Note that the vinyl ester is considered a sheet molding compound.

As applied to claim 9, Barz et al. teach that the thermosettable material (sheet molding compound/vinyl ester) is compressed (applying pressure to force it into the mold, col. 3, lines 27-29).

As applied to claim 16, Barz et al. teach a process wherein the article of manufacture is an automotive vehicle and the structure is a pillar of the automotive vehicle (col. 2, line 6);

the thermosettable material is based upon a vinyl ester (col. 3, lines 35-36);

the step of molding the material is carried out at an elevated temperature in a heated mold (pouring of liquid resin into the mold and allowing resin to solidify, col. 3, lines 63-67 and col. 4, lines 1-5); and

the reinforcement, sealing or baffling member, upon activation and adhesion of the expandable material provides reinforcement to the structure of the automotive vehicle (col. 4, lines 36-39).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3726

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barz et al. in view of Wycech (US 5,755,486).

As applied to claim 3, Barz et al. teach a process wherein the thermosettable material is a molding compound/vinyl ester but do not explicitly teach the resin content by percent of weight. However, Wycech teaches a method of making a reinforced structural member in an automotive body including a the resin (vinyl resin, col. 5, lines 31-32) content from about 45% to about 70% by weight (overlaps the claimed range of about 30% and about 60% by weight) to provide a low density, high strength material which is strong and yet light-weight (col. 5, lines 5-9). It would have been obvious to one of ordinary skill in the art at the time of invention to have provided Barz et al. with a resin content as taught by Wycech in order to provide an effective and high strength structural member.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barz et al. in view of Schmidt et al. (US 3,692,620). Barz et al. teach the claimed invention with the exception of explicitly teaching the material of the curing agent. However, Schmidt et al. teach a method of making laminated boards by molding a thermosettable material (polyester resin, col. 3, lines 46-52) wherein benzoyl peroxide is used as curing agent (col. 3, lines 58-59). It would have been obvious to one of ordinary skill in the art at the time of invention to have provided Barz et al. with a curing agent as taught by Schmidt

Art Unit: 3726

et al. in order to provide an effective means of setting and hardening the molded thermosetting resin:

6. Claims 5-7 and 10, are rejected under 35 U.S.C. 103(a) as being unpatentable over Barz et al. in view of Cydzik et al. (US 6,114,004).

As applied to claims 5 and 6, Barz et al. teach the claimed invention with the exception of explicitly teaching the reinforcing material made of a fiber including glass fibers. However, Cydzik et al. teach a method of filling/sealing of channels such as pillars in the body structure of automobiles comprising of thermosettable resin that includes glass fibers as a reinforcing material in order to provide an effective support member having the structural integrity and durability necessary to permit storage of the cavity sealing article within the cavity to be sealed (col. 7, lines 25-31). It would have been obvious to one of ordinary skill in the art at the time of invention to have provided Barz et al. with a glass fibers as reinforcement materials as taught by Cydzik et al. in order to provide an effective means of setting a sealing member within a desired cavity.

As applied to claim 7, Barz et al./Cydzik et al. teach the claimed invention with the exception of explicitly teaching that greater than 50% of the fibers have a length greater than about 1.5 inches.

It would have been obvious matter of design choice to use a length of greater than about 1.5 inches for greater than 50% of the fibers used, since applicant has not disclosed that only the above mentioned length can be used to resolve any stated problem and further states that the fibers for the reinforcement material may be highly

Art Unit: 3726

variable in length depending on the molding compound and depending upon the processing that the molding compound will undergo (specification, page 5, lines 5-7), therefore, it appears that the invention would perform equally well with other lengths as one with ordinary skill in the art finds suitable to use in order to provide adequate and effective fiber length for adequate number of grains resulting in a strong reinforcement material used in a particular process.

As applied to claim 10, Barz et al. teach the claimed invention with the exception of explicitly teaching the molding temperature for forming the thermosettable material into a carrier member. It would have been obvious matter of design choice to use a suitable temperature range for molding the thermosettable material, since applicant has not disclosed that only the above mentioned temperature range can be used to resolve any stated problem (specification, page 7, lines 1-3), therefore, it appears that the invention would perform equally well with other temperatures as one with ordinary skill in the art finds suitable to use in order to provide adequate and effective molding temperature for any particular thermosettable material that would result in a strong reinforcement/sealing member.

7. Claims 17 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by Barz et al. or, in the alternative, under 35 U.S.C. 103(a) as obvious over Barz et al. in view of Agrawal et al. (US 5,707,473).

As applied to claim 17, Barz et al. teach the claimed invention including the step of applying the activatable material (26, Fig. 2) includes contacting the activable

Art Unit: 3726

material (26, Fig. 2) with the surface (24, Fig. 2) of the carrier member (22, Fig. 2) as the temperature of the carrier member declines from elevated temperature achieved during the molding step, such contacting thereby softening a portion of the activatable material with the heat of the carrier member to wet the surface of the carrier member; and allowing the softened portion of the activatable material to harden and adhere the activatable material to the carrier member (col. 3, lines 63-67 and col. 4, lines 1-5).

In the alternative, it would have been obvious matter of design choice to use any suitable method of attaching and bonding the activatable material to the carrier member, since applicant has not disclosed that only the above mentioned method can be used to resolve any stated problem, it appears that the invention would perform equally well with other attaching means as one with ordinary skill in the art finds suitable to use in order to provide an adequate and effective bonding between the activatable material and the carrier member.

Furthermore, note that Agrawal et al. teach a method for bonding an attachment member to a substrate in order to make a panel assembly wherein the bond between the attachment member and the substrate is achieved by an adhesive, set cured or hardened by the addition of heat, prior to, during and/or after the molding process (col. 3, lines 14-17).

It would have been obvious to one of ordinary skill in the art at the time of invention to have provided Barz et al. with the detailed bonding and adhering steps as taught by Agrawal et al. in order to provide an effective bonding between the two members of an assembly.

As applied to claim 18, Barz et al. teach a process wherein the activatable material is applied to the carrier member as a plurality of shaped pieces (plurality of pellets 26, Fig. 1).

8. Claims 19 and 20, are rejected under 35 U.S.C. 102(b) as anticipated by Barz et al. or, in the alternative, under 35 U.S.C. 103(a) as obvious over Barz et al. in view of Agrawal et al. and further in view of Wycech (US 6,332,731).

As applied to claim 19, Barz et al. teach the step of applying the activatable material (26, Fig. 1) to the carrier member further includes supporting the carrier member (body 22, Fig. 1) with a fixture (20, Fig. 1, col. 2, lines 50-51).

In the alternative, it would have been obvious matter of design choice to use any suitable fixture or device to support the carrier member in order to apply the activatable material to it. Furthermore, it is inherent that something (such as a fixture or device) is supporting the carrier member during the application of the activatable material onto it, even though that fixture is a tabletop or a palm of a hand.

Furthermore, note that Agrawal et al. teach the step of bonding an attachment member to a substrate and Wycech teaches a method for reinforcing a hollow structure of an automotive vehicle wherein a fixture (mold 52, Fig. 5) is used to support carrier (36) in order to apply the activatable material (adhesive layer 38) on to it in order to provide a uniform sized and desired thickness (col. 5, lines 51-57).

It would have been obvious to one of ordinary skill in the art at the time of invention to have provided Barz et al. with the bonding step as taught by Agrawal et al.

Art Unit: 3726

and a with a suitable fixture as taught by Wycech in order to provide an effective bonding between activatable material to the carrier member.

As applied to claim 20, Barz et al. teach the fixture (20 comprised of actuating arms 28 and carrier member 22 including support member portion and surface portion 24, Fig. 1), the support surface including a plurality of cavities and wherein the contacting of the activatable material (26, Fig. 2) with the surface of the carrier member includes placing the plurality of shaped pieces (26, Fig. 2) into the plurality of cavities (cavities in the surface 24 surrounding embedded portions 34 of the activatable material 26, Fig. 2) and supporting the carrier member upon the support member such that the pieces contact the surface of the carrier member.

Allowable Subject Matter

9. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 1-10 and 16-21 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3726


Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarang Afzali whose telephone number is 571-272-8412. The examiner can normally be reached on 7:00-3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SA
1/4/2007


DAVID P. BRYANT
SUPERVISORY PATENT EXAMINER

1/8/07